

## ABSTRACT OF THE DISCLOSURE

For a method for measuring process parameters of a material working process using a high energy beam (2), in particular a laser beam, focused onto a working zone of a workpiece (8), by measuring coaxially to the high energy radiation in the working zone the light intensity in the area of vapour capillaries (14) produced by the high energy beam (2) by means of an optical sensor (10) scanning a picture field and supplying the resultant measuring signals to an evaluation means (18), an optical sensor (10) having a dynamic range of more than 70 dB is used, and the measuring signals of sections of the picture field showing the area of the vapour capillaries (14) and at least the area of the melting zone (20) surrounding the vapour capillaries (14) are simultaneously transmitted to the evaluation means (18).

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